

# A NEW SKINK (REPTILIA: SCINCIDAE: GENUS *EMOIA*) FROM THE NEW HEBRIDES

WITH COMMENTS ON THE STATUS OF *EMOIA SAMOENSIS*  
*LOYALTIENSIS* (ROUX)

By LORD MEDWAY

DURING the Royal Society/Percy Sladen expedition to the New Hebrides, 1971, three immature skinks of an undescribed taxon were caught on Aneityum island. Subsequently three further specimens, taken on the same island by Miss Evelyn Cheesman, were found among the collections of the British Museum (Natural History) where they had been catalogued as *Emoia nigra*. Apart from a note that the period of collecting was 1954-55, Miss Cheesman's material lacks field data. It is likely, but not certain, that the skinks were caught near Red Crest, the camp three miles from the coast (at Anelgauhat) at about 1200 ft (366 m) elevation, occupied by Miss Cheesman from mid-March through July 1955 (see Cheesman, 1957 : 312-327). Of this site, Miss Cheesman has written :

'Plenty of lizards darted about all over the clearing on sunny days, overcast days made them inactive and then one found them under logs, in holes, or hollow trees . . . Individuals were inclined to be tame, a smooth blue-grey skink with a green mate would appear whenever I had meals outside on the clearing. She accepted cheese, bread, biscuit, boiled rice and banana but refused cooked taro, beating a retreat as if insulted. To catch lizards was another matter, but I did succeed in getting a good series.'

During the 1971 expedition skinks were also collected on all other islands visited, i.e. in order northwards from Aneityum, Tanna, Erromanga, Efate, Malekula, Malo, Aore and Espiritu Santo. Previous collections from these islands, and from others in the group, have been reported by Boulenger (1887), Roux (1913), Schmidt & Burt (1930), Burt & Burt (1932) and Angel (1935). Additional unpublished material from the New Hebrides, examined in the course of preparation of this note, is preserved in the Muséum National d'Histoire Naturelle, Paris (François collection), the Natur-Museum Senckenberg, Frankfurt a. Main (Bregulla collection), and the British Museum (Natural History) (mainly collected by J. R. Baker and associates or by E. Cheesman). Other than the six examples from Aneityum, no other representatives of the undescribed skink have been found among any collections. Since it is evidently confined to the island of Aneityum, it is appropriate that the new taxon be named :

*Emoia aneityumensis* n. sp. – the Aneityum skink

HOLOTYPE. BM 1956.1.3.65, adult male, collected by Miss E. Cheesman on Aneityum island, New Hebrides, South West Pacific, 1954-55 ; for likely place and period of collection, see above.

PARATYPES. BM 1956.1.3.63, adult male, and 1956.1.3.64, subadult female, also collected on Aneityum by Miss Cheesman during 1954-55; BM 1973.1534 (collectors' number RSNH 14-01), juvenile, apparently female, caught on 19 July 1971, BM 1973.1535 (RSNH 18-01), immature female, 21 July 1971, and BM 1973.1536 (RSNH 19-03), juvenile male, 23 July 1971, all taken in disturbed and partially regenerated forest about 1 mile northeast of Anelgauhat, Aneityum, by Lord Medway and A. G. Marshall.

DIAGNOSIS. In size and colour, and in the scalation of the head, similar to *Emoia samoensis* (Duméril & Duméril), differing in the greater number of longitudinal scale rows and the smaller number of subdigital lamellae. Similarly coloured to *Emoia speiseri* (Roux), but again differing in details of scalation, larger as a mature adult, and evidently producing a greater number of eggs at one time.

DESCRIPTION. An *Emoia*, possessing the characters of that genus as defined by Gray (1845: 95) and elaborated by Smith (1937). On the head, the prefrontals form a short medial suture, thus excluding the nasals from contact with the frontals. The interparietal is a separate shield, not fused to the parietals. The fifth or sixth upper labial is large, underlying the eye.

The coloration of the holotype, after 18 years in alcohol, is dark brown on the upperparts, with a broken row of irregularly shaped black spots or flecks extending as an interrupted dorsolateral line from the ear orifice to the base of the tail, passing above the origins of the hindlimbs. The flanks are brown, barred and flecked by invasions of the buffy white ventral colour. In the three young animals, when freshly caught, the upperparts were grey-brown or olive-brown, marked with a broken row of irregular spots, flecks or blotches of black, intermixed with flecks of *eau-de-nil*, running from the ear to the base of the tail. The flanks were olive-brown, barred and flecked with the colour of the underparts, which were dirty white. The unbroken tail was the same brown as the ground colour of the upperparts, but regenerated portions were a lighter shade of brown, more or less unmarked. The specimen BM 1956.1.3.63 (again, after 18 years in preservative) is uniformly greyish brown above and buff below, without markings; in my opinion, in life it could well have appeared 'smooth blue-grey' (cf. Cheesman 1957: 325, quoted above).

Details of scalation and measurements are given in Table 1. By comparison, specimens of *Emoia samoensis* (two syntypes nos. 2764 & 7070 in the Paris museum, two from Samoa nos. 4632 & 4633 in the Basel museum, and two from Erromanga nos. 1860.3.18.8 & 1860.3.18.11 in the British Museum) have 32-36 scale rows at mid-body, 44-51 subdigital lamellae under the fourth toe, and measure snout-vent length 92-102 mm, total length 250-290 per cent. Twelve specimens of *Emoia speiseri* from all parts of this species' range in the New Hebrides have 28-34 scale rows at mid-body, 38-48 subdigital lamellae under the fourth toe, and measure 60-72 mm snout-vent, total length about 270 per cent (cf. Roux, 1913).

The female *E. aneityumensis* BM 1956.1.3.64 has four enlarged ova in the left ovary and at least one in the right, and BM 1973.1535 has four enlarging ova discernible in the right ovary (left ovary not recognized). Of six undoubted female *E. speiseri* examined, two only had enlarging ova; one had a single large follicle in

the left ovary only, and the other had one large follicle in each ovary. Among *E. samoensis*, Roux (1913), has reported a gravid female containing four large ova or eggs ('gros œufs').

There is no reason to believe that *E. aneityumensis* is confined to the vicinity of Anelgauhat on Aneityum. Retrospectively I attribute to this species a grey skink judged to be at least the size of the holotype (Table 1), seen (but not caught) climbing the cliff above the sea-shore at Aegiptzav, on the north coast of the island, in July 1971.

TABLE 1

Scale counts and measurements of the type series of *Emoia aneityumensis*

Reg. no. BM	Longitudinal scale rows at mid-body	Lamellae under fourth toe		Snout-vent length (mm)	Total length <sup>1</sup> (as % snout-vent)
		Left	Right		
1956.1.3.65 <sup>2</sup>	40	42	42	92	(250)
1956.1.3.63	40	38	38	89	274
1956.1.3.64	40	36	36	83	(240)
1973.1534	42	39	38	49	257
1973.1535	40	41	41	70	(203)
1973.1536	41	38	39	66	(221)

<sup>1</sup> Figures are given in parentheses if the tail showed signs of loss and subsequent regeneration.

<sup>2</sup> Holotype.

#### DISCUSSION

The genus *Emoia* is represented in the New Hebrides by ten taxa (Medway & Marshall, in prep.), of which *E. sanfordi*, *E. speiseri* and *E. aneityumensis* are endemic to the archipelago. Only *E. aneityumensis* is confined, as far as known, to a single island.

Of the two taxa most closely resembling *E. aneityumensis*, *E. speiseri* is sympatric with it on Aneityum island. Differences between the two, described above, establish that they are distinct species. *E. samoensis*, on the other hand, has been found in the New Hebrides only on Erromanga, some 180 km north-northwest of Aneityum and the next large island but one. The specimens (BM 1860.3.18.8 & 1860.3.18.11) were collected more than a century ago by Mr Cuming (Boulenger, 1887). In 1971 we did not find the species, but our stay on Erromanga was brief and collecting not intensive; there are no grounds to doubt the record. The third of Cuming's specimens allocated to this species by Boulenger (BM 1860.3.18.12) is in fact *E. sanfordi*, an identification which confirms at least that the collection derived from the New Hebrides.

Samples of *E. samoensis* from all parts of its range, from the Loyalty Islands to Fiji and the Samoan group, provide no evidence of geographical variation. Separation of the Loyalty Islands population, described as a subspecies by Roux (1913), is not justified. The distinguishing character – adult size invariably less than that of examples from neighbouring archipelagoes ('archipels voisins') – was established by



comparison with specimens from the New Hebrides (Roux 1913 : 110). This material (in the Basel Museum of Natural History) was re-examined in the course of preparation of this note. All New Hebrides specimens identified by Roux (1913 : 155) as *Lygosoma (Emoia) samoense*, a synonym of *E. samoensis*, prove to be *E. sanfordi* and thus provide a fallacious basis for comparison. In the scalation of the head, the number of longitudinal scale rows and of subdigital lamellae, specimens from the Loyalty Islands fall within the range of variation of *E. samoensis* from other parts of the South West Pacific.

The absence of demonstrable geographical variation in *E. samoensis* over this wide area makes it unlikely that the species would differentiate markedly between Erromanga and Aneityum islands. *E. samoensis* and *E. aneityumensis* may replace each other ecologically on their respective islands in the New Hebrides, but there are no grounds for treating the two taxa as geographical races of one species. The characters that distinguish *Emoia aneityumensis* set the taxon apart from all other members of the genus, and it must be treated as a distinct species.

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